wherein said data extractor extracts a reduced number of frames of the frame data comprised within the video data.

REMARKS

Claims 1-26 are pending in the application. Claims 1, 4, 6-9, 11, 16, 19, 20, 23, and 26 are independent. Claims 1, 4, 6-9, 11, 16, 19, 20, 23, and 26 have been amended.

INFORMATION DISCLOSURE STATEMENT

An Information Disclosure Statement (IDS) was filed in connection with the present application on October 10, 1998. However, Applicant has not received an initialed copy of the PTO-1449 accompanying this IDS from the Examiner indicating that the references listed thereon have been considered. Applicant therefore respectfully requests that the Examiner consider these references and include an initialed copy of the PTO-1449 form in the next communication to Applicant.

ALLOWABLE SUBJECT MATTER

In page 2 of the outstanding Office Action, the Examiner indicated that claims 19 and 20 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant respectfully submits that in the above claim amendments, claims 19 and 20 have been rewritten in independent form

including the features of base claim 16. Accordingly, allowance of claims 19 and 20 is respectfully requested.

35 U.S.C. § 103(a) KATSEFF ET AL./DIXIT REJECTION

Claims 2, 4-9, 11-18, and 21-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,822,537 to Katseff et al. (hereafter Katseff) in view of newly-cited U.S. Patent No. 5,260,783 to Dixit (hereafter Dixit). This rejection, insofar as it pertains to the presently pending claims, is respectfully traversed for the following reasons.

Synopsis of Dixit

Dixit discloses a digital video encoder that encodes video frames into differential video frames, using either an intra-frame coding mode (which uses only the information in the present video frame) or a composite intra-/inter-frame coding mode (which uses a combination of the information in the present video frame and previous video frames). The coding mode is selected for each video frame by an encoding selector based on the amount of motion between the present video frame and the previous video frame. Dixit further discloses that the encoded frames are passed through a layered discrete cosine transform (DCT), which separates the video data into sets of DCT coefficients corresponding to a range of resolution. Dixit discloses that during high network congestion,

DCT coefficients corresponding to the highest resolution layers can be discarded.

Claims 1, 2, 5, 12-15, 17, 18, 21, 22, 24, and 25

As amended, independent claims 1 now recites, among other things, a data extractor for extracting frame data from video data, where a number of frames within the extracted frame data corresponds to a load condition of a network or a video distribution device. Applicant respectfully submits that none of Katseff and Dixit discloses this feature. Applicant further respectfully submits that independent claim 11 recites a data extractor very similar to the above feature. Applicant submits that independent claim 16 recites the above feature in the form of a data extracting step.

Applicant respectfully submits that Katseff is silent with respect to any type of data extractor. Further, Applicant respectfully submits that the encoding selector of Dixit does not extract frame data from the video data, which contains a number of frames corresponding to a load condition. Instead, Dixit discloses that the encoding selector merely chooses an encoding mode (i.e., either intra-frame mode or intra/inter-frame mode) for encoding each frame of the video data. See column 4, lines 8-21 of Dixit. The encoded video data of Dixit's system will have exactly the same number of frames as the original video data. Therefore,

the number of frames of Dixit's encoded video data does not correspond to any type of load condition.

Applicant respectfully submits that claims 1, 11, and 16 are allowable at least for the reasons set forth above. Accordingly, Applicant respectfully submits that claims 2, 3, 5, 10, 12-15, 17, 18, 21, 22, 24, and 25 are allowable, by virtue of their dependence on claims 1, 11, and 16, at least for the reasons set forth above. Reconsideration and withdrawal of the rejection of claims 1, 2, 5, 12-15, 17, 18, 21, 22, 24, and 25 is respectfully requested.

Claims 4, 6-9, 23, and 26

In the above claim amendments, claims 4, 6-9, 23, and 26 have been rewritten in independent form including the features of the base claims and any intervening claims. Accordingly, Applicants respectfully submit that these amendments have in no way changed the scope of the claims.

Claim 4 recites a data extractor, which extracts video data with the inter-frame compressed frame data deleted therefrom based on a load condition. None of Katseff and Dixit teaches or suggests this feature. As mentioned above, Katseff provides no teaching of a data extractor. Further, Dixit provides absolutely no teaching of deleting inter-frame compressed framed data from video data. Conversely, Dixit's system is directed to an encoding system where inter-frame compressed data (i.e.,

composite intra/inter-frame coded data) is actually generated. Accordingly, independent claim 4 is allowable at least for these reasons.

Claims 6-8 each recite a data extractor, which generates MPEG data with inter-frame compressed data (either B or P pictures) deleted therefrom. As discussed above, Dixit provides absolutely no disclosure of deleting inter-frame data. Instead, Dixit only discloses the generation of inter-frame compressed data. Katseff provides no disclosure of a data extractor. Therefore, none of Katseff and Dixit teaches or suggests this feature. Accordingly, independent claims 6-8 are allowable at least for the reasons set forth above.

Claim 9 recites a data extractor, which extracts a plurality of I, pictures at intervals corresponding to a load condition. Katseff fails to disclose a data extractor. Dixit fails to disclose the extraction of I pictures at an interval corresponding to a load condition. Dixit's encoder extracts and encodes every picture from the video data. Dixit merely suggests that the highest resolution DCT coefficients of certain pictures can be discarded when network congestion is high in column 10, lines 40-43. This passage merely suggests that a high-resolution portion of certain types of pictures can be deleted. Dixit provides absolutely no disclosure of changing the interval at which pictures are extracted and encoded based on network congestion, or any other criteria. Accordingly, Applicant respectfully submits that independent claim 9 is allowable at least for the reasons set forth above.

Claim 23 recites the assigning of priorities to two kinds of inter-frame data, P picture and B picture, and a data extractor that selectively extracts inter-frame data based upon the assigned priority. Applicant respectfully submits that none of Katseff and Dixit provides any disclosure with respect to assigning priorities to B and P pictures. Accordingly, Applicant respectfully submits that claim 23 is allowable at least for this reason.

Claim 26 recites a data extractor, which extracts a reduced number of frames from the video data. The combination of Katseff and Dixit fail to disclose this feature. Katseff fails to disclose a data extractor. Dixit provides absolutely no disclosure of the extraction of a reduced number of frames from the video data. As mentioned above with respect to claims 1, 11, and 16, Dixit's encoder encodes each frame of the video data, such that the encoded data will have exactly the same number of frames as the original video data. Accordingly, Applicant respectfully submits that independent claim 26 is allowable for the reasons set forth above.

Reconsideration and withdrawal of the rejection of claims 4, 6-9, 23, and 26 is respectfully requested.

35 U.S.C. § 103(a) KATSEFF/DIXIT/TAKAHASI REJECTION

Claims 3 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Katseff in view of Dixit and U.S. Patent No. 5,739,865

to Takahashi. This rejection, insofar as it pertains to the presently pending claims, is respectfully traversed for the following reasons.

In page 9 of the outstanding Office Action, the Examiner admits that neither Katseff nor Dixit disclose a data extractor that thins frame data based on a load condition. The Examiner therefore imports the teachings of Takahashi to remedy this deficiency.

Takahashi discloses a process for thinning out frame data in order to allow a video signal to be shown on NTSC or PAL television systems. Applicants therefore respectfully submit that Takahashi's invention is directed to solving a completely different problem than Katseff and Dixit. Takahashi is simply not concerned with the problem of network congestion or encoding video data into a compressed signal suitable for transmission over a packet switched network. Accordingly, Applicant respectfully submits that no motivation exists for combining the teachings of Takahashi with Katseff and Dixit.

Applicant further respectfully submits that the Examiner has failed to provide a proper motivation for making the proposed combination, as required in the decision of In re Dembiczak, 50 USPQ2d 1614 (Fed. Cir. 1999). In page 9 of the Office Action, the Examiner states that the motivation to combine Takahashi with Katseff and Dixit is "to manipulate frame data as much as possible." Applicant respectfully submits that such a statement fails to provide any type of motivation to one of ordinary skill to combine these references. The mere manipulation of

data, by itself, provides no advantage or benefit. In fact, manipulating data just for the sake of manipulating data results in unnecessary processing and decreased efficiency.

Applicants respectfully submit that the Examiner's combination of Katseff, Dixit, and Takahashi is not proper. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdrawal the rejection of claims 3 and 10.

CONCLUSION

In view of the above remarks, reconsideration of the rejection and allowance of claims 1-26 is respectfully requested.

If the Examiner has any questions concerning this application, the Examiner is requested to contact John A. Castellano, Registration No. 35,094 at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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JAC/JWR/kss

Attachment: Version with Markings to Show Changes Made

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Claims 1, 4, 6-9, 11, 16, 23, and 26 have been amended as follows:

1. (Twice Amended) A video data distribution device which comprises:

a load processing device for processing a load condition of a network or the video data distribution device;

a data extractor for extracting [an amount of] frame data from video data comprising frame data, [the amount] wherein a number of frames within the extracted frame data [corresponding] corresponds to a load condition processed by said load processing device; and

a transmitter for transmitting the frame data extracted by the data extractor.

4. (Twice Amended) [The] A video data distribution device [according to claim 1] which comprises:

a load processing device for processing a load condition of a network or the video data distribution device;

a data extractor for extracting an amount of frame data from video data comprising frame data, the amount of extracted frame data corresponding to a load condition processed by said load processing device; and

a transmitter for transmitting the frame data extracted by the data

extractor,

wherein the video data comprises intra-frame compressed frame data and inter-frame compressed frame data,

the data extractor extracts the video data with the inter-frame compressed frame data deleted therefrom, based on the load condition processed by the load processing device, and

the transmitter transmits the video data extracted by the data extractor.

6. (Twice Amended) [The] A video data distribution device [according to claim 5] which comprises:

a load processing device for processing a load condition of a network or the video data distribution device;

a data extractor for extracting an amount of frame data from video data comprising frame data, the amount of extracted frame data corresponding to a load condition processed by said load processing device; and

a transmitter for transmitting the frame data extracted by the data extractor,

wherein the video data is MPEG data,

wherein the MPEG data comprises I pictures and P pictures, and

the data extractor generates MPEG data with P pictures deleted therefrom in accordance with the load condition processed by the load

processing device.

7. (Twice Amended) [The] A video data distribution device [according to claim 5] which comprises:

a load processing device for processing a load condition of a network or the video data distribution device;

a data extractor for extracting an amount of frame data from video data comprising frame data, the amount of extracted frame data corresponding to a load condition processed by said load processing device; and

a transmitter for transmitting the frame data extracted by the data extractor,

wherein the video data is MPEG data,

wherein the MPEG data comprises I pictures and B pictures, and

the data extractor generates MPEG data with B pictures deleted therefrom in accordance with the load condition processed by the load processing device.

8. (Twice Amended) [The] A video data distribution device [according to claim 5] which comprises:

a load processing device for processing a load condition of a network or the video data distribution device;

a data extractor for extracting an amount of frame data from video

data comprising frame data, the amount of extracted frame data corresponding to a load condition processed by said load processing device; and

a transmitter for transmitting the frame data extracted by the data extractor,

wherein the video data is MPEG data,

wherein the MPEG data comprises I pictures, P pictures, and B pictures, and

the data extractor generates MPEG data with P pictures and B pictures deleted therefrom in accordance with the load condition processed by the load processing device.

9. (Twice Amended) [The] A video data distribution device [according to claim 5] which comprises:

a load processing device for processing a load condition of a network or the video data distribution device;

a data extractor for extracting an amount of frame data from video data comprising frame data, the amount of extracted frame data corresponding to a load condition processed by said load processing device; and

a transmitter for transmitting the frame data extracted by the data extractor,

wherein the video data is MPEG data,

wherein the MPEG data comprises a plurality of I pictures, and

the data extractor extract plural I pictures at intervals corresponding to the load condition processed by the load processing device.

11. (Twice Amended) A video data distribution system which comprises:

a load measuring device for measuring a load condition of a network or the video data distribution system;

a video data distribution device comprising a data extractor for extracting [an amount of] frame data from video data comprising frame data, [the amount] wherein a number of frames within the extracted frame data [corresponding] corresponds to a measurement result of said load measuring unit, and a transmitter for transmitting the frame data extracted by the data extractor via a network; and

a video data playback device for receiving the frame data transmitted from the transmitter of said video data distribution device via said network and playing back the received frame data.

16. (Twice Amended) A video data distribution method which comprises:

a transmission level determining step of determining a transmission level in accordance with a load of a video data distribution

system;

a data extracting step of extracting [an amount of] frame data from video data comprising frame data, wherein a number of frames within the extracted frame data [corresponding] corresponds to the transmission level determined by said transmission level determining step; and

a transmitting step of transmitting the frame data extracted by said data extracting step,

said data extracting step and said transmitting step being performed within a video data distribution device.

19. (Twice Amended) [The] A video data distribution method [according to claim 16] which comprises:

a transmission level determining step of determining a transmission level in accordance with a load of a video data distribution system;

a data extracting step of extracting an amount of frame data from video data comprising frame data corresponding to the transmission level determined by said transmission level determining step; and

a transmitting step of transmitting the frame data extracted by said data extracting step,

said data extracting step and said transmitting step being performed within a video data distribution device,

wherein in the transmission level determining step, when the video data playback device plays back the video data with fast speed, the transmission level is determined in such a manner that frame data is extracted from video data having a portion of its frame data thinned, and when fast playback is not performed, the transmission level is determined in such a manner that the frame data of the video data is not thinned.

20. (Twice Amended) [The] A video data distribution method [according to claim 16] which comprises:

a transmission level determining step of determining a transmission level in accordance with a load of a video data distribution system;

a data extracting step of extracting an amount of frame data from video data comprising frame data corresponding to the transmission level determined by said transmission level determining step; and

a transmitting step of transmitting the frame data extracted by said data extracting step,

said data extracting step and said transmitting step being performed within a video data distribution device,

wherein the video data comprises frame data and voice data, and

in the data extracting step, when the video data playback device quickly forwards and plays back the video data, said voice data is deleted

from the video data and an amount of frame data corresponding to the transmission level is extracted to generate video data, and

in the transmitting step, the video data generated by said data extracting step is transmitted.

23. (Amended) [The] A video data distribution device [according to claim 5] which comprises

a load processing device for processing a load condition of a network or the video data distribution device;

a data extractor for extracting an amount of frame data from video data comprising frame data, the amount of extracted frame data corresponding to a load condition processed by said load processing device; and

a transmitter for transmitting the frame data extracted by the data extractor,

wherein the video data is MPEG data,

wherein the MPEG data includes two kinds of inter-frame data, said two kinds of inter-frame data being P picture and B picture,

and said inter-frame data is selectively extracted from the MPEG data by the data extractor based upon a priority assigned to each kind of inter-fame data.

26. (Amended) [The] A video data distribution device [according to claim 1] which comprises:

a load processing device for processing a load condition of a network or the video data distribution device;

a data extractor for extracting an amount of frame data from video data comprising frame data, the amount of extracted frame data corresponding to a load condition processed by said load processing device; and

a transmitter for transmitting the frame data extracted by the data extractor,

wherein said data extractor extracts a reduced number of frames of the frame data comprised within the video data.